What is claimed is:

1. Non-luminescent spherical rare earth activated barium fluoride halide particles having the following formula (I):

$$Ba_{1-a}M^{II}_{a}FX:yM^{I},zLn \qquad (I)$$

in which M^{II} is at least one alkaline earth metal selected from the group consisting of Ca and Sr; M^{I} is at least one alkali metal selected from the group consisting of Li, Na, K, Rb and Cs; X is at least one halogen selected from the group consisting of Cl, Br and I; Ln is at least one rare earth element selected from the group consisting of Ce, Pr, Nd, Pm, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb and Lu; and a, y and z are numbers satisfying the conditions of $0 \leq a \leq 0.5$, $0 \leq y \leq 0.05$, and $0 < z \leq 0.2$, respectively.

2. Non-luminescent particles of claim 1, wherein the particles have a percentage of sphericity of 50% or more, the percentage of sphericity indicating a percentage of surface areas other than crystal faces based on a total surface area of the particles.

3. The non-luminescent particles of claim 2, wherein the percentage of sphericity is 70% or more.

4. The non-luminescent particles of claim 3, wherein the percentage of sphericity is 90% or more.

5. Non-luminescent particles of claim 1, wherein the particles have a mean size in the range of 0.1 to 20.0 μm.

6. The non-luminescent particles of claim 5, wherein the mean particle size is in the range of 0.2 to 10.0 μm.

7. Non-luminescent particles of claim 1, wherein the particles have a coefficient of variation of 30% or less.

8. The non-luminescent particles of claim 7, wherein the coefficient of variation is 20% or less.

9. Non-luminescent particles of claim 1, wherein Ln in the formula (I) is Ce or Eu.

10. Non-luminescent particles of claim 1, wherein X in the formula (I) is Br and/or I.

11. A process for preparing spherical rare earth activated barium fluoride halide phosphor particles, having the following formula (I):

$$Ba_{1-a}M^{II}_{a}FX:yM^{I},zLn \qquad (I)$$

in which M^{II} is at least one alkaline earth metal selected from the group consisting of Ca and Sr; M^{I} is at least one alkali metal selected from the group consisting of Li, Na, K, Rb and Cs; X is at least one halogen selected from the group consisting of Cl, Br and I; Ln is at least one rare earth element selected from the group consisting of Ce, Pr, Nd, Pm, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb and Lu; and a, y and z are numbers satisfying the conditions of $0 \leq a \leq 0.5$, $0 \leq y \leq 0.05$, and $0 < z \leq 0.2$, respectively;

which comprises the steps of:

dissolving at least a water-soluble polymer material and a halide containing an X ion in an aqueous medium,

whereby preparing an aqueous solution in which the X ion is dissolved in an amount of 3.0 mol/L or more and which has a pH value in the range of 5.0 to 14.0 and a temperature in the range of 0°C to 80°C;

mixing an aqueous barium compound solution, an aqueous fluoride solution, and an aqueous X ion-containing halide solution with the aqueous solution prepared in the first step while a resulting mixture solution is kept at a temperature in the range of 0°C to 80°C, whereby forming barium fluoride halide particles in the mixture solution,

removing the water-soluble polymer material from the mixture solution containing the barium fluoride halide particles;

mixing the mixture solution from the water-soluble polymer material is removed with an aqueous solution containing a rare earth compound, an alkaline earth metal compound and an alkali metal compound, the alkaline earth metal compound being not contained in the case of a=0 and the alkali metal compound being not contained in the case of y=0, whereby precipitating spherical rare earth activated barium fluoride halide particles;

separating the spherical rare earth activated barium fluoride halide particles from the resulting mixture solution; and

firing the spherical rare earth activated barium fluoride halide particles whereby obtained the spherical rare earth activated barium fluoride halide phosphor particles.

12. The process of claim 11, wherein the water-soluble polymer material has an average molecular weight in the range of 10,000 to 200,000.

13. The process of claim 12, wherein the water-soluble polymer material is gelatin.

14. The process of claim 13, wherein the gelatin is a modified gelatin which has at least one carboxyl group per one amino group of the gelatin.

15. The process of claim 14, wherein the modified gelatin is a phthalated gelatin.

16. The process of claim 13, wherein the gelatin is a modified gelatin which has at least two carboxyl groups per one amino group of the gelatin.

17. The process of claim 16, wherein the modified gelatin is a trimellitated gelatin.

18. The process of claim 11, wherein the X ion is dissolved in the aqueous solution prepared in the first step in an amount of 4.0 mol/L or more.

19. The process of claim 11, wherein the halide containing an X ion which is employed in the first step is ammonium bromide.

20. The process defined of claim 11, wherein the temperature of the solution in the first and second steps is in the range of 5°C to 60°C.

21. The process defined of claim 11, wherein the temperature of the solution in the first and second steps is in the range of 10°C to 40°C.

22. The process of claim 11, wherein the pH value in the first step is in the range of 7.0 to 13.0.

23. The process of claim 11, wherein the pH value in the first step is in the range of 8.0 to 12.0.

24. The process of claim 11, wherein the barium compound in the second step is barium acetate.

25. A method for preparing spherical rare earth activated barium fluoride halide phosphor particles, having the following formula (I):

$$Ba_{1-a}M^{II}_{a}FX:yM^{I},zLn \qquad (I)$$

in which M^{II} is at least one alkaline earth metal selected from the group consisting of Ca and Sr; M^{I} is at least one alkali metal selected from the group consisting of Li, Na, K, Rb and Cs; X is at least one halogen selected from the group consisting of Cl, Br and I; Ln is at least one rare earth element selected from the group consisting of Ce, Pr, Nd, Pm, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb and Lu; and a, y and z are numbers satisfying the conditions of $0 \leq a \leq 0.5$, $0 \leq y \leq 0.05$, and $0 < z \leq 0.2$, respectively;
which comprises firing a spherical rare earth activated barium fluoride halide particles which give a luminance less than a luminance given by the spherical rare earth activated barium fluoride halide phosphor particles.